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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/550,665

03/17/2006

Philippe Cosquer

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EXAMINER

NGUYEN, HUONG Q

ART UNIT

PAPER NUMBER

3736

MAIL DATE

DELIVERY MODE

06/26/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/550,665	Applicant(s) COSQUER ET AL.	
	Examiner HELEN NGUYEN	Art Unit 3736	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 and 29-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 and 29-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responsive to the Preliminary Amendment filed 9/26/2005 is acknowledged. Amendments to the abstract and specification are acknowledged. Claims 1-27 and 29-34 are amended. Claims 28 is cancelled. **Claims 1-27 and 29-34** remain pending and under prosecution.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in Application No. 10550665, filed on 9/26/2005 and 5/16/2006. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. It is noted that Applicant has not submitted an Information Disclosure Statement (IDS). Applicant is reminded of the duty to disclose all known prior art resulting from such art searches.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the holding strap of **Claims 24-26** must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing

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sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claims 1-18 and 22-26** are rejected under 35 U.S.C. 102(b) as being anticipated by Gorsuch et al (US Pat No. 5218972).

7. In regards to **Claim 1**, Gorsuch et al disclose a device for measuring at least one item of physiological information through the skin of an individual, comprising: a) A flexible membrane

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38 designed to come into contact with the skin of the individual; b) A deformable space 24 formed by the flexible membrane; c) A support card upon which at least one sensor 26 is mounted, wherein the sensor constitutes the entire support card, the card mounted to the membrane to close the space; d) A flexible substance 36 filling the space for transmitting to the at least one sensor at least one physical force to be undergone by the membrane, best seen in Figure 2.

8. In regards to **Claim 2**, the membrane 38 comprises means of fixing to the support, best seen in Figure 2.

9. In regards to **Claim 3**, said membrane 38 defines at least one housing 22 designed to receive the said support, best seen in Figure 2.

10. In regards to **Claim 4**, said membrane 38 comprises means 39 for fixing to a shell element 22 of the said device, best seen in Figure 2.

11. In regards to **Claim 5**, said membrane 38 defines at least one housing 12 designed to receive the said shell element 22, best seen in Figure 2.

12. In regards to **Claim 6**, the fixing means acts by clipping.

13. In regards to **Claim 7**, the membrane 38 has at least two areas with different rigidities due to stretching of the membrane during assembly.

14. In regards to **Claim 8**, the membrane 38 has a main contact area, designed to come in contact with the skin of the individual, and a peripheral area, extending over the contour of the main contact area, best seen in Figure 1-2.

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15. In regards to **Claim 9**, each of the areas fulfills a distinct function, belonging to the group comprising the measurement of forces, the transmission of forces and the rigidity of the shape of the membrane (abst).

In regards to **Claim 10**, the thickness of the peripheral area is less than the thickness of the main contact area.

16. In regards to **Claim 11**, the membrane 38 is capable of being obtained by overmoulding at least two materials with different rigidities, wherein it is noted that the process of making an element in an apparatus claim does not carry much patentable weight.

17. In regards to **Claim 12**, the membrane 38 is produced from at least one hypoallergenic material (Col.3: 49-53).

18. In regards to **Claim 13**, the membrane 38 and the substance 36 has an elastic character (Col.3: 44-53).

19. In regards to **Claim 14**, the substance 36 is a substantially non-compressible material (Col.3: 44).

20. In regards to **Claim 15**, the substance 36 is a dielectric material.

21. In regards to **Claim 16**, the substance 36 is a silicone gel (Col.3: 46).

22. In regards to **Claim 17**, the sensor 26 is at least one transducer for measuring at least one dynamic force, representing an arterial pressure wave or a relative movement (abst).

23. In regards to **Claim 18**, the sensor 26 is at least one transducer for measuring at least one static force (abst).

24. In regards to **Claim 22**, a shell is formed from a complementary a bottom shell element 12 carrying the said membrane and a top shell element 16, best seen in Figure 1-2.

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25. In regards to **Claim 23**, the shell elements 12, 16 are connected together by screwing, clipping or adhesive bonding, also providing a seal for the substance 36 (Col.4: 3-4).
26. In regards to **Claim 24**, a holding strap is fixed to the top shell element 16 through slots 42, best seen in Figure 1-2 (Col.4: 5-6).
27. In regards to **Claim 25**, the holding strap and the said top shell element has a capacity for extensibility and elastic recovery so as to facilitate the application of a prestressing to the device.
28. In regards to **Claim 26**, the holding strap and at least a portion of the shell are capable of forming a single piece produced from a flexible material.

Claim Rejections - 35 USC § 103

29. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

30. **Claims 19-21 and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gorsuch et al in view of Stivorc et al (US Pat No. 7020508).

31. In regards to **Claim 19**, Gorsuch et al disclose the invention above but do not disclose the sensor measures skin temperature. Stivorc et al disclose an analogous physiological information measuring device comprising multiple types of sensors including a skin temperature sensor (Col.6: 45-48). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a skin temperature sensor with the invention of Gorsuch

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et al as taught by Stivoric et al to effectively acquire other pertinent information such as the temperature of the user's skin.

32. In regards to **Claim 20**, Gorsuch et al disclose the invention above but do not disclose the sensor is comprised from a group of a piezocapacitive sensor, a piezoresistive sensor or a contact switching at a predetermined pressure. Stivoric et al disclose an analogous physiological information measuring device comprising a force sensor in the form of a piezoresistive sensor (Col.39: 33-39). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the sensor be a piezoresistive sensor as taught by Stivoric et al as an effective force sensor to measure such.

33. In regard to **Claims 21 and 27**, Gorsuch et al disclose the invention above but do not disclose the support card is a printed circuit carrying electronic components for effecting the amplification, treatment and processing of electrical signals and a decision relating to a state of the individual and means for supplying electrical energy and a communication interface. Stivoric et al disclose an analogous physiological information measuring device comprising a support card that is a printed circuit or printed circuit board (PCB) 445 carrying electronic components for effecting the amplification, treatment and processing of electrical signals and a decision relating to a state of the individual, best seen in Figure 18, 20, and 29 (Col.23-28). Stivoric et al also disclose means for supplying electrical energy, i.e. battery (Col.23: 43-47), and a communication interface, best seen in Figure 21. Stivoric et al also teach using the sensor data to determine various types of information such as listed in Table 1 (Col.8).

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34. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Gorsuch et al to include a support card that is a printed circuit carrying electronic components for effecting the amplification, treatment and processing of electrical signals and a decision relating to a state of the individual and means for supplying electrical energy and a communication interface, as taught by Stivoric et al, to enhance the device by enabling subsequent processing of the collected data resulting from transmission of the physical force by the substance to determine at least one item of blood pressure information; at least one item of information representing a pulse; at least one item of information representing an arterial tension; at least one item of information representing respiration; at least one item of information representing an activity of the said individual; at least one item of information representing a fall; at least one item of information representing a wave form; at least one item of information representing the skin temperature of the wearing area; at least one item of information as to whether the device is worn or not worn; and at least one item of information representing a change of one of the above items of information.

35. **Claims 29-34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Gorsuch et al in view of Scholz et al (US Pat No. 6598482).

36. In regards to **Claim 29**, Gorsuch et al disclose a device for measuring at least one item of physiological information including necessary electronic components 26 on a support 22 and thus comprising such, a membrane 38 and the support defining a deformable space 24, and a substance 36 filling the space, best seen in Figure 1-2. However, Gorsuch et al do not disclose a

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method of manufacturing said device. Scholz et al disclose a method of manufacturing an analogous physiological information sensing device comprising at least a membrane (diaphragm plate) defining a space filled with a substance, best seen in Figure, wherein after the components have been assembled together, the substance is finally injected in the space (p.3 Claim 13 "d"). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Gorsuch et al such that the method of manufacturing the device comprises assembling all the components by mounting the necessary electronic components on the support, connecting together a membrane and the support to define the deformable space, and then finally injecting the substance in said space, as taught by Scholz et al, as an effective method of manufacturing such devices.

37. In regards to **Claim 30**, Scholz discloses the substance is injected into the space in a liquid form (Claim 13 p.3).

38. In regards to **Claim 31**, Gorsuch et al disclose the support 22 is inserted in at least one housing 12 defined in the membrane 38, best seen in Figure 2.

39. In regards to **Claim 32**, Gorsuch et al disclose the membrane 38 is fixed to a bottom shell element 12, by means of at least one housing 16 provided for this purpose on the membrane, best seen in Figure 2.

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40. In regards to **Claim 33**, Gorsuch et al disclose assembling a shell formed from a bottom shell element 12 and a top shell element 16, best seen in Figure 2.

41. In regards to **Claim 34**, Gorsuch et al disclose the shell elements 12, 16 are connected together by screwing, clipping or adhesive bonding (Col.4: 3-4).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HELEN NGUYEN whose telephone number is (571)272-8340. The examiner can normally be reached on Monday - Friday, 9 am - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on 571-272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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